

ABSTRACT

**A RADIATION IMAGING SYSTEM, DEVICE AND
METHOD FOR SCAN IMAGING**

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An imaging system for high energy radiation direct conversion scan imaging includes a high energy radiation source and a semiconductor high energy radiation direct conversion imaging device arranged around an object position. The imaging device includes a plurality of imaging cells, each imaging cell comprising a detector cell and a
10 readout cell for producing imaging cell output values representative of high energy radiation incident on the detector cell. The source member and/or the imaging device were arranged to move substantially continuously relative to each other for scanning an object at the object position. The readout cells are operated to read out the imaging cell output values at time intervals which substantially correspond to an object image point
15 traversing half the distance of a detector region or cell in the scanning direction. Such a configuration provides for pixel level resolution during the scanning operation.

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